

WHAT IS CLAIMED IS:

1. An information processing apparatus capable of instructing a printing device to execute a print job via a predetermined network, comprising:

5       a reader which reads out data from a detachable storage medium;

          a print job issuing unit which issues a print job, for which a suspension attribute is set, to said printing device;

10       a client authentication controller which, in the case in which user authentication based upon authentication information peculiar to a user read by said reader is successful, performs control such that issuance of a print job by said job issuing unit is  
15   made possible; and

          a writer which writes job designation information peculiar to the print job, which is returned from said printing device according to the issuance of the print job by said print job issuing  
20   unit, in the detachable storage medium.

2. An information processing apparatus according to Claim 1, wherein

          said print job issuing unit is capable of  
25   issuing a plurality of print jobs, and

          said reader writes job designation information peculiar to each of the plurality of print jobs,

which are returned from said printing device according to the issuance of the plurality of print jobs by said print job issuing unit, in the detachable storage medium.

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3. An information processing apparatus according to Claim 1, wherein said print job issuing unit uses the Internet Printing Protocol as a communication procedure in print job issue and  
10 acceptance processing.

4. An information processing apparatus according to Claim 1, wherein the job designation information includes a Job-URI specifying the print  
15 job.

5. An information processing apparatus according to Claim 1, wherein said client authentication controller inquires success or failure  
20 of user authentication from an authentication server, with which said printer authentication controller can communicate via the network, according to the authentication information peculiar to the user.

25 6. An information processing apparatus according to Claim 5, wherein  
said information processing apparatus has a

password input unit which inputs a password peculiar to the user, and

5       said client authentication controller inquires success or failure of user authentication from said authentication server according to the authentication information peculiar to the user read out from the detachable storage medium and the password peculiar to the user inputted by said password input unit.

10       7. An information processing apparatus capable of instructing a printing device to execute a print job via a predetermined network, comprising:

15       a print job issuing unit which issues a print job, for which a suspension attribute is set, to said printing device; and

20       a writer which writes a Job-URI specifying the print job, which is returned from said printing device according to the issuance of the print job by said print job issuing unit, in the detachable storage medium.

25       8. A printing device capable of subjecting a print job, which is issued from an information processing apparatus via a predetermined network, to print processing, comprising:

      a print job server which accepts the print job issued from said information processing apparatus and

subjects the print job to print processing and which,  
in the case in which a suspension attribute is set in  
the print job, performs control such that the print  
processing is suspended and held until release of  
5 suspension of job processing is instructed;

a job designation information replier which, in  
response to acceptance of the print job issued from  
said information processing apparatus, replies job  
designation information peculiar to the print job to  
10 said information processing apparatus;

a reader which reads data of a detachable  
storage medium;

a printer authentication controller which, in  
the case in which user authentication based upon  
15 authentication information peculiar to a user read  
out from the detachable storage medium by said reader  
is successful, controls permission to use said  
printing device; and

a job release controller which, in response to  
20 said reader reading out the job designation  
information peculiar to the print job from the  
detachable storage medium, performs control such that  
an instruction to release suspension of job  
processing is issued to said print job server.

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9. A printing device according to Claim 8,  
wherein

said print job server is capable of performing control such that a plurality of print jobs are held, and

said job release controller performs control  
5 such that first job designation information stored in the detachable storage medium is read out and an instruction to release suspension of job processing of a print job corresponding to a first job is issued and, in the case in which second job designation  
10 information is further stored in the detachable storage medium, second job designation information is successively read out and an instruction to release suspension of printing of a print job corresponding to a second job is issued.

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10. A printing device according to Claim 8, wherein said print job server uses the Internet Printing Protocol as a communication procedure in print job issue and acceptance processing.

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11. A printing device according to Claim 8, wherein the job designation information includes a Job-URI.

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12. A printing device according to Claim 8, further comprising a printing device which executes print processing of a print job corresponding to the

job designation information for which the instruction to release suspension of printing is issued by said job release controller.

5           13. A printing device according to Claim 12, wherein, after said printing device ends the print processing, said print job server issues an instruction to delete the job designation information corresponding to the print job, for which the print  
10 processing has ended, stored in the detachable storage medium.

          14. A printing device according to Claim 12, wherein, after said printing device ends the print  
15 processing, the print job server deletes the print job for which the print processing has ended.

          15. A printing device according to Claim 8, wherein said printer authentication controller  
20 controls permission to use said printing device by inquiring success or failure of user authentication from an authentication server, with which said printer authentication controller can communicate via the network, according to the authentication  
25 information peculiar to the user.

          16. A printing device according to Claim 15,

wherein

said printing device has password input means  
which inputs a password peculiar to the user, and  
said printer authentication controller controls  
5 permission to use said printing device by inquiring  
success or failure of user authentication from said  
authentication server according to the authentication  
information peculiar to the user read out from the  
detachable storage medium and the password peculiar  
10 to the user inputted by said password input means.

17. A printing device capable of subjecting a  
print job, which is issued from an information  
processing apparatus via a predetermined network, to  
15 print processing, comprising:

a print job server which accepts the print job  
issued from said information processing apparatus and  
subjects the print job to print processing and which,  
in the case in which a suspension attribute is set in  
20 the print job, performs control such that the print  
processing is suspended and held until release of  
suspension of job processing is instructed;

a job designation information replier which, in  
response to acceptance of the print job issued from  
25 said information processing apparatus, replies a Job-  
URI specifying the print job to said information  
processing apparatus;

a reader which reads data from and writes data in a detachable storage medium; and

a job release controller which, in response to said reader reading out the Job-URI peculiar to the  
5 print job from the detachable storage medium, performs control such that an instruction to release suspension of job processing is issued to said print job server.

10 18. A printing system which has an information processing apparatus capable of instructing a printing device to execute a print job via a predetermined network and a printing device capable of subjecting the print job, which said information  
15 processing apparatus instructed said printing device to execute, to print processing,

wherein said information processing apparatus comprises:

a first reader which reads data of a detachable  
20 storage medium;

a print job issuing unit which issues a print job to said printing device with a suspension attribute set to the print job;

a client authentication controller which, in  
25 the case in which user authentication based upon authentication information peculiar to a user read by said first reader is successful, performs control



such that issuance of the print job by the job  
issuing unit is made possible; and

a writer which, in response to the issuance of  
the print job by said print job issuing unit, writes  
5 job designation information peculiar to the print job  
returned from said printing device in the detachable  
storage medium, and

wherein said printing device comprises:

a print job server which accepts the print job  
10 issued from said information processing apparatus and  
subjects the print job to print processing and which,  
in the case in which a suspension attribute is set in  
the print job, performs control such that the print  
processing is suspended and held until release of  
15 suspension of job processing is instructed;

a job designation information replier which, in  
response to acceptance of the print job issued from  
said information processing apparatus, replies job  
designation information peculiar to the print job to  
20 said information processing apparatus;

a second reader which reads data of a  
detachable storage medium;

a printer authentication controller which, in  
the case in which user authentication based upon  
25 authentication information peculiar to a user read  
out from the detachable storage medium by said second  
reader is successful, controls permission to use said

printing device; and

a job release controller which, in the case in which job designation information peculiar to the print job in a suspended state is stored in the detachable storage medium, reads out the job designation information and performs control such that an instruction to release suspension of job processing is issued to said print job server.

10           19. A control method for an information processing apparatus which is capable of instructing a printing device to execute a print job via a predetermined network, comprising:

a reading step of reading authentication information peculiar to a user from a detachable storage medium;

a client authenticating step of, in the case in which user authentication based upon authentication information peculiar to the user read in said reading step is successful, performing control such that issuance of a print job is made possible;

a print job issuance step of issuing a print job to the printing device with a suspension attribute set to the print job based upon the control in said client authenticating step; and

a writing step of, in response to issuance of the print job, writing job designation information

peculiar to the print job returned from the printing device in the detachable storage medium.

20. A control method for an information  
5 processing apparatus which is capable of instructing a printing device to execute a print job via a predetermined network, comprising:

a reading step of reading authentication  
information peculiar to a user from a detachable  
10 storage medium;

a print job issuance step of issuing a print  
job to the printing device with a suspension  
attribute set to the print job; and

a writing step of, in response to issuance of  
15 the print job, writing a Job-URI specifying the print job returned from the printing device in the detachable storage medium.

21. A control method for a printing device  
20 capable of subjecting a print job, which is issued from an information processing apparatus via a predetermined network, to printing process, comprising:

a print job holding step of, in the case in  
25 which a suspension attribute is set in the print job issued from the information processing apparatus, performing control such that the print processing is

suspended and held until release of suspension of job processing is instructed;

5 a job designation information returning step of, in response to acceptance of the print job issued from the information processing apparatus, returning job designation information peculiar to the print job to the information processing apparatus;

10 a reading step of reading out authentication information peculiar to the user from a detachable storage medium;

15 a printer authenticating step of, in the case in which user authentication based upon the authentication information peculiar to the user read out from the detachable storage medium is successful, controlling permission to use the printing device;

20 a job processing suspension release issuing step of, in the case in which the job designation information peculiar to the suspended print job is stored in the detachable storage medium, issuing an instruction to release suspension of job processing based upon the job designation information; and

25 a printing step of, in response to the release of suspension of job processing, executing print processing of the print job held in the suspended state.

22. A control method for a printing device

according to Claim 21, further comprising a job designation information deleting step of, after ending the print processing of the print job in said printing step, deleting the job designation  
5 information peculiar to the print job from the detachable storage medium.

23. A control method for a printing device according to Claim 21, further comprising a print job  
10 deleting step of, after ending the print processing of the print job in said printing step, deleting the print job.

24. A control method for a printing device  
15 capable of subjecting a print job, which is issued from an information processing apparatus via a predetermined network, to printing process, comprising:

a print job holding step of, in the case in  
20 which a suspension attribute is set in the print job issued from the information processing apparatus, performing control such that the print processing is suspended and held until release of suspension of job processing is instructed;

25 a Job-URI returning step of, in response to acceptance of the print job issued from the information processing apparatus, returning a Job-URI

specifying the print job to the information  
processing apparatus;

5 a job processing suspension release issuing  
step of, in the case in which the Job-URI is stored  
in a detachable storage medium, reading out the Job-  
URI and issuing an instruction to release suspension  
of job processing; and

10 a printing step of, in response to the release  
of suspension of job processing, executing print  
processing of the print job held in the suspended  
state.

25. A printing method for a printing system  
which has an information processing apparatus capable  
15 of issuing a print job to a printing device via a  
predetermined network and instructing remote printing,  
and a printing device which is capable of subjecting  
the print job issued from the information processing  
apparatus to remote print processing, said printing  
20 method comprising:

a first reading step of reading authentication  
information peculiar to a user from a detachable  
storage medium in the information processing  
apparatus;

25 a client authenticating step of, in the case in  
which user authentication based upon the  
authentication information peculiar to the user read

in said first reading step is successful, performing control such that issuance of a print job is made possible;

5 a print job issuing step of issuing a print job with a suspension attribute set to the print job to the printing device based upon the control in said client authenticating step;

10 a job designation information returning step of, in response to acceptance of the print job issued from the information processing apparatus in the print job issuing step, returning job designation information peculiar to the print job to the information processing apparatus;

15 a print job holding step of, in the case in which the suspension attribute is set in the print job issued to the printing device from the information processing apparatus, performing control such that the print job is held until release of suspension of job processing is instructed;

20 a writing step of writing the job designation information peculiar to the print job returned from the printing device to the information processing apparatus in the detachable storage medium;

25 a second reading step of reading authentication information peculiar to the user from the detachable storage medium in the printing device;

a printer authenticating step of, in the case

in which user authentication based upon the authentication information peculiar to the user read out from the detachable storage medium is successful, controlling permission to use the printing device;

5           a job processing suspension release issuing step of, in the case in which job designation information peculiar to the suspended print job is stored in the detachable storage medium, reading out the job designation information and issuing an  
10   instruction to release suspension of job processing; and

          a printing step of, in response to the release of suspension of job processing, executing print processing of the print job held in the suspended  
15   state.

26. A printing method for a printing system which has an information processing apparatus capable of issuing a print job to a printing device via a  
20   predetermined network and instructing remote printing, and a printing device which is capable of subjecting the print job issued from the information processing apparatus to remote print processing, said printing method comprising:

25           a print job issuing step of issuing a print job with a suspension attribute set to the print job to the printing device;



a job designation information returning step of,  
in response to acceptance of the print job issued  
from the information processing apparatus in said  
print job issuing step, returning a Job-URI  
5 specifying the print job to the information  
processing apparatus;

a print job holding step of, in the case in  
which the suspension attribute is set in the print  
job issued to the printing device from the  
10 information processing apparatus, performing control  
such that the print job is held until release of  
suspension of job processing is instructed;

a writing step of writing the Job-URI returned  
from the printing device to the information  
15 processing apparatus in the detachable storage  
medium;

a job processing suspension release issuing  
step of, in the case in which job designation  
information peculiar to the suspended print job is  
20 stored in the detachable storage medium, reading out  
the Job-URI and issuing an instruction to release  
suspension of job processing; and

a printing step of executing print processing  
of the print job held in the suspended state based  
25 upon the instruction for releasing suspension of job  
processing.

27. A program for executing a control method  
for an information processing apparatus which is  
capable of instructing a printing device to execute a  
print job via a predetermined network, said control  
5 method comprising:

a reading step of reading authentication  
information peculiar to a user from a detachable  
storage medium;

a client authenticating step of, in the case in  
10 which user authentication based upon authentication  
information peculiar to the user read in said reading  
step is successful, performing control such that  
issuance of a print job is made possible;

a print job issuance step of issuing a print  
15 job to the printing device with a suspension  
attribute set to the print job based upon the control  
in said client authenticating step; and

a writing step of, in response to issuance of  
the print job, writing job designation information  
20 peculiar to the print job returned from the printing  
device in the detachable storage medium.

28. A program for executing a control method  
for an information processing apparatus which is  
25 capable of instructing a printing device to execute a  
print job via a predetermined network, said control  
method comprising:

a reading step of reading authentication information peculiar to a user from a detachable storage medium;

5 a print job issuance step of issuing a print job to the printing device with a suspension attribute set to the print job; and

a writing step of, in response to issuance of the print job, writing a Job-URI specifying the print job returned from the printing device in the  
10 detachable storage medium.

29. A program for executing a control method for a printing device capable of subjecting a print job, which is issued from an information processing  
15 apparatus via a predetermined network, to printing process, said control method comprising:

a print job holding step of, in the case in which a suspension attribute is set in the print job issued from the information processing apparatus,  
20 performing control such that the print processing is suspended and held until release of suspension of job processing is instructed;

a job designation information returning step of, in response to acceptance of the print job issued  
25 from the information processing apparatus, returning job designation information peculiar to the print job to the information processing apparatus;

a reading step of reading out authentication information peculiar to the user from a detachable storage medium;

5 a printer authenticating step of, in the case in which user authentication based upon the authentication information peculiar to the user read out from the detachable storage medium is successful, controlling permission to use the printing device;

10 a job processing suspension release issuing step of, in the case in which the job designation information peculiar to the suspended print job is stored in the detachable storage medium, issuing an instruction to release suspension of job processing based upon the job designation information; and

15 a printing step of, in response to the release of suspension of job processing, executing print processing of the print job held in the suspended state.

20 30. A program for executing a control method for a printing device capable of subjecting a print job, which is issued from an information processing apparatus via a predetermined network, to printing process, said control method comprising:

25 a print job holding step of, in the case in which a suspension attribute is set in the print job issued from the information processing apparatus,

performing control such that the print processing is suspended and held until release of suspension of job processing is instructed;

5 a Job-URI returning step of, in response to acceptance of the print job issued from the information processing apparatus, returning a Job-URI specifying the print job to the information processing apparatus;

10 a job processing suspension release issuing step of, in the case in which the Job-URI is stored in a detachable storage medium, reading out the Job-URI and issuing an instruction to release suspension of job processing; and

15 a printing step of, in response to the release of suspension of job processing, executing print processing of the print job held in the suspended state.

31. A program for executing a printing method  
20 for a printing system which has an information processing apparatus capable of issuing a print job to a printing device via a predetermined network and instructing remote printing and a printing device which is capable of subjecting the print job issued  
25 from the information processing apparatus to remote print processing, said printing method comprising:

a first reading step of reading authentication

information peculiar to a user from a detachable storage medium in the information processing apparatus;

5 a client authenticating step of, in the case in which user authentication based upon the authentication information peculiar to the user read in the first reading step is successful, performing control such that issuance of a print job is made possible;

10 a print job issuing step of issuing a print job with a suspension attribute set to the print job to the printing device based upon the control in said client authenticating step;

15 a job designation information returning step of, in response to acceptance of the print job issued from the information processing apparatus in said print job issuing step, returning job designation information peculiar to the print job to the information processing apparatus;

20 a print job holding step of, in the case in which the suspension attribute is set in the print job issued to the printing device from the information processing apparatus, performing control such that the print job is held until release of suspension of job processing is instructed;

25

a writing step of writing the job designation information peculiar to the print job returned from

the printing device to the information processing apparatus in the detachable storage medium;

a second reading step of reading authentication information peculiar to the user from the detachable storage medium in the printing device;

a printer authenticating step of, in the case in which user authentication based upon the authentication information peculiar to the user read out from the detachable storage medium is successful, controlling permission to use the printing device;

a job processing suspension release issuing step of, in the case in which job designation information peculiar to the suspended print job is stored in the detachable storage medium, reading out the job designation information and issuing an instruction to release suspension of job processing; and

a printing step of, in response to the release of suspension of job processing, executing print processing of the print job held in the suspended state.

32. A program for executing a printing method for a printing system which has an information processing apparatus capable of issuing a print job to a printing device via a predetermined network and instructing remote printing, and a printing device

which is capable of subjecting the print job issued from the information processing apparatus to remote print processing, said printing method comprising:

5 a print job issuing step of issuing a print job with a suspension attribute set to the print job to the printing device;

a job designation information returning step of, in response to acceptance of the print job issued from the information processing apparatus in said  
10 print job issuing step, returning a Job-URI specifying the print job to the information processing apparatus;

a print job holding step of, in the case in which the suspension attribute is set in the print  
15 job issued to the printing device from the information processing apparatus, performing control such that the print job is held until release of suspension of job processing is instructed;

a writing step of writing the Job-URI returned  
20 from the printing device to the information processing apparatus in the detachable storage medium;

a job processing suspension release issuing step of, in the case in which job designation  
25 information peculiar to the suspended print job is stored in the detachable storage medium, reading out the Job-URI and issuing an instruction to release



suspension of job processing; and

5       a printing step of executing print processing  
of the print job held in the suspended state based  
upon the instruction for releasing suspension of job  
processing.

33. A computer-readable storage medium to which  
there is stored a program for executing a control  
method for an information processing apparatus which  
10 is capable of instructing a printing device to  
execute a print job via a predetermined network, said  
control method comprising:

15       a reading step of reading authentication  
information peculiar to a user from a detachable  
storage medium;

20       a client authenticating step of, in the case in  
which user authentication based upon authentication  
information peculiar to the user read in said reading  
step is successful, performing control such that  
issuance of a print job is made possible;

      a print job issuance step of issuing a print  
job to the printing device with a suspension  
attribute set to the print job based upon the control  
in said client authenticating step; and

25       a writing step of, in response to issuance of  
the print job, writing job designation information  
peculiar to the print job returned from the printing

device in the detachable storage medium.

34. A computer-readable storage medium to which there is stored a program for executing a control  
5 method for an information processing apparatus which is capable of instructing a printing device to execute a print job via a predetermined network, said control method comprising:

a reading step of reading authentication  
10 information peculiar to a user from a detachable storage medium;

a print job issuance step of issuing a print job to the printing device with a suspension attribute set to the print job; and

15 a writing step of, in response to issuance of the print job, writing a Job-URI specifying the print job returned from the printing device in the detachable storage medium.

20 35. A computer-readable storage medium to which there is stored a program for executing a control method for a printing device capable of subjecting a print job which is issued from an information processing apparatus via a predetermined network, to  
25 printing process, said control method comprising:

a print job holding step of, in the case in which a suspension attribute is set in the print job

issued from the information processing apparatus,  
performing control such that the print processing is  
suspended and held until release of suspension of job  
processing is instructed;

5       a job designation information returning step of,  
in response to acceptance of the print job issued  
from the information processing apparatus, returning  
job designation information peculiar to the print job  
to the information processing apparatus;

10       a reading step of reading out authentication  
information peculiar to the user from a detachable  
storage medium;

          a printer authenticating step of, in the case  
in which user authentication based upon the  
15 authentication information peculiar to the user read  
out from the detachable storage medium is successful,  
controlling permission to use the printing device;

          a job processing suspension release issuing  
step of, in the case in which the job designation  
20 information peculiar to the suspended print job is  
stored in the detachable storage medium, issuing an  
instruction to release suspension of job processing  
based upon the job designation information; and

          a printing step of, in response to the release  
25 of suspension of job processing, executing print  
processing of the print job held in the suspended  
state.

36. A computer-readable storage medium to which there is stored a program for executing a control method for a printing device capable of subjecting a print job which is issued from an information  
5 processing apparatus via a predetermined network, to printing process, said control method comprising:

a print job holding step of, in the case in which a suspension attribute is set in the print job issued from the information processing apparatus,  
10 performing control such that the print processing is suspended and held until release of suspension of job processing is instructed;

a Job-URI returning step of, in response to acceptance of the print job issued from the  
15 information processing apparatus, returning a Job-URI specifying the print job to the information processing apparatus;

a job processing suspension release issuing step of, in the case in which the Job-URI is stored  
20 in a detachable storage medium, reading out the Job-URI and issuing an instruction to release suspension of job processing; and

a printing step of, in response to the release of suspension of job processing, executing print  
25 processing of the print job held in the suspended state.

37. A computer-readable storage medium to which there is stored a program for executing a printing method for a printing system which has an information processing apparatus capable of issuing a print job  
5 to a printing device via a predetermined network and instructing remote printing and a printing device which is capable of subjecting the print job issued from the information processing apparatus to remote print processing, said printing method comprising:  
10 a first reading step of reading authentication information peculiar to a user from a detachable storage medium in the information processing apparatus;  
a client authenticating step of, in the case in  
15 which user authentication based upon the authentication information peculiar to the user read in said first reading step is successful, performing control such that issuance of a print job is made possible;  
20 a print job issuing step of issuing a print job with a suspension attribute set to the print job to the printing device based upon the control in said client authenticating step;  
a job designation information returning step of,  
25 in response to acceptance of the print job issued from the information processing apparatus in said print job issuing step, returning job designation

information peculiar to the print job to the  
information processing apparatus;

a print job holding step of, in the case in  
which the suspension attribute is set in the print  
5 job issued to the printing device from the  
information processing apparatus, performing control  
such that the print job is held until release of  
suspension of job processing is instructed;

a writing step of writing the job designation  
10 information peculiar to the print job returned from  
the printing device to the information processing  
apparatus in the detachable storage medium;

a second reading step of reading authentication  
information peculiar to the user from the detachable  
15 storage medium in the printing device;

a printer authenticating step of, in the case  
in which user authentication based upon the  
authentication information peculiar to the user read  
out from the detachable storage medium is successful,  
20 controlling permission to use the printing device;

a job processing suspension release issuing  
step of, in the case in which job designation  
information peculiar to the suspended print job is  
stored in the detachable storage medium, reading out  
25 the job designation information and issuing an  
instruction to release suspension of job processing;  
and

a printing step of, in response to the release of suspension of job processing, executing print processing of the print job held in the suspended state.

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38. A computer-readable storage medium to which there is stored a program for executing a printing method for a printing system which has an information processing apparatus capable of issuing a print job to a printing device via a predetermined network and instructing remote printing, and a printing device which is capable of subjecting the print job issued from the information processing apparatus to remote print processing, said printing method comprising:

10       a print job issuing step of issuing a print job with a suspension attribute set to the print job to the printing device;

15       a job designation information returning step of, in response to acceptance of the print job issued from the information processing apparatus in said print job issuing step, returning a Job-URI specifying the print job to the information processing apparatus;

20       a print job holding step of, in the case in which the suspension attribute is set in the print job issued to the printing device from the information processing apparatus, performing control